AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims

in the application:

**Listing of Claims:** 

1. (Previously Presented) A peptide consisting of an amino acid sequence

DYDY which is identical to a sequence of consecutive amino acids found within amino

acids 695 to 698 (SEQ ID NO. 10) of the human blood clotting factor Va.

2. (Original) The peptide of claim 1 wherein the peptide exhibits an IC<sub>50</sub> of

less than about 100 µM, the IC<sub>50</sub> being the amount of the peptide that inhibits 50% of

the activity of human factor Va.

(Original) The peptide of claim 2 wherein the peptide exhibits an IC<sub>50</sub> of 3.

less than about 15 µM.

(Original) The peptide of claim 3 wherein the peptide exhibits an IC<sub>50</sub> of 4.

about 1.6 µM.

5. (Original) The peptide of claim 4 wherein the peptide exhibits an IC<sub>50</sub> of

about 500 nM.

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- 6. (Cancelled).
- 7. (Cancelled).
- 8. (Original) A pharmaceutical composition comprising the peptide of claim

Claim 9 (Canceled)

1.

10. (Original) A peptide analogue that mimics the peptide of claim 1.

Claims 11-42 (Canceled)

- 43. (Currently Amended) A pharmaceutical composition adapted for inhibiting thrombin generation in a human, the composition comprising a peptide including an amino acid sequence DYDY (SEQ ID NO. 10).
- 44. (Original) The pharmaceutical composition of claim 43 further comprising a carrier.
- 45. (Original) The pharmaceutical composition of claim 43 wherein one of the Y amino acids of the amino acid sequence is sulfonated.

46.

(Original) The pharmaceutical composition of claim 45 wherein the amino

acid sequence of the peptide is DY(-SO<sub>3</sub>)DY.

47. (Original) The pharmaceutical composition of claim 45 wherein the amino

acid sequence of the peptide is DYDY(-SO<sub>3</sub>).

48. (Original) The pharmaceutical composition of claim 43 wherein both of the

Y amino acids of the amino acid sequence are sulfonated.

49. (Original) The pharmaceutical composition of claim 48 wherein the amino

acid sequence of the peptide is DY(-SO<sub>3</sub>)DY(-SO<sub>3</sub>).

Claim 50 (Canceled)

51. (Original) A pharmaceutical composition comprising a peptide analogue

that mimics the peptide of the composition of claim 43.

Claims 52-111 (Canceled)

112. (Previously Presented) A peptide for direct binding to thrombin, the

peptide consisting of a sequence of four amino acids which is identical to a sequence of

consecutive amino acids found within amino acids 695 to 698 DYDY (SEQ ID NO. 10)

of the human blood clotting factor Va.

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113. (Previously Presented) The peptide of claim 112 wherein the peptide

consists of the amino acid sequence DYDY.

114. (Previously Presented) A pharmaceutical composition comprising the

peptide of claim 112.

115. (Previously Presented) A peptide analogue that mimics the peptide of

claim 112.

116. (Previously Presented) A peptide consisting of a sequence of five amino

acids which is identical to a sequence of consecutive amino acids found within amino

acids 695 to 699 DYDYQ (SEQ ID NO. 11) of the human blood clotting factor Va.

117. (Previously Presented) The peptide of claim 116 wherein the peptide

consists of the amino acid sequence DYDYQ.

118. (Previously Presented) A pharmaceutical composition comprising the

peptide of claim 116.

119. (Previously Presented) A peptide analogue that mimics the peptide of

claim 116.

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120. (Currently Amended) A pharmaceutical composition adapted for inhibiting

thrombin generation in a human, the composition comprising a peptide consisting of an

amino acid sequence DYDY (SEQ ID NO. 10).

121. (Previously Presented) The pharmaceutical composition of claim 120

further comprising a carrier.

122. (Previously Presented) The pharmaceutical composition of claim 120

wherein one of the Y amino acids of the amino acid sequence is sulfonated.

123. (Previously Presented) The pharmaceutical composition of claim 122

wherein the amino acid sequence of the peptide is DY(-SO<sub>3</sub>)DY.

124. (Previously Presented) The pharmaceutical composition of claim 122

wherein the amino acid sequence of the peptide is DYDY(-SO<sub>3</sub>).

125. (Previously Presented) The pharmaceutical composition of claim 120

wherein both of the Y amino acids of the amino acid sequence are sulfonated.

126. (Previously Presented) The pharmaceutical composition of claim 125

wherein the amino acid sequence of the peptide is DY(-SO<sub>3</sub>)DY(-SO<sub>3</sub>).

127. (Previously Presented) A pharmaceutical composition comprising a

peptide analogue that mimics the peptide of the composition of claim 120.

128. (Currently Amended) A pharmaceutical composition adapted for inhibiting

thrombin generation in a human, the composition comprising a peptide consisting of an

amino acid sequence DYDYQ (SEQ ID NO. 11).

129. (Previously Presented) The pharmaceutical composition of claim 128

further comprising a carrier.

130. (Previously Presented) The pharmaceutical composition of claim 128

wherein one of the Y amino acids of the amino acid sequence is sulfonated.

131. (Previously Presented) The pharmaceutical composition of claim 130

wherein the amino acid sequence of the peptide is DY(-SO<sub>3</sub>)DYQ.

132. (Previously Presented) The pharmaceutical composition of claim 130

wherein the amino acid sequence of the peptide is DYDY(-SO<sub>3</sub>)Q.

133. (Previously Presented) The pharmaceutical composition of claim 128

wherein both of the Y amino acids of the amino acid sequence are sulfonated.

(Previously Presented) The pharmaceutical composition of claim 133 wherein the amino acid sequence of the peptide is DY(-SO<sub>3</sub>)DY(-SO<sub>3</sub>)Q.

135. (Previously Presented) A pharmaceutical composition comprising a peptide analogue that mimics the peptide of the composition of claim 128.

136. (Currently Amended) A peptide for direct binding to thrombin in a human, the peptide consisting of an amino acid sequence DYDYQ which is identical to a sequence of consecutive amino acids found within amino acids 695 to 699 (SEQ ID No. 11) of the human blood clotting factor Va.

- 137. (Previously Presented) The peptide of claim 136 wherein the peptide exhibits an IC<sub>50</sub> of less than about 100 µM, the IC<sub>50</sub> being the amount of the peptide that inhibits 50% of the activity of human factor Va.
- 138. (Previously Presented) The peptide of claim 137 wherein the peptide exhibits an  $IC_{50}$  of less than about 15  $\mu$ M.
- (Previously Presented) The peptide of claim 138 wherein the peptide exhibits an  $IC_{50}$  of about 1.6  $\mu$ M.
- (Previously Presented) The peptide of claim 139 wherein the peptide exhibits an IC<sub>50</sub> of about 500 nM.

141. (Previously Presented) A pharmaceutical composition comprising the peptide of claim 136.

142. (Previously Presented) A peptide analogue that mimics the peptide of claim 136.